Hongcai Gao

List of Publications by Year
in descending order

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Version: 2024-02-01

66 papers	8,388 citations	57631 44 h-index	123241 61 g-index
67 all docs	67 docs citations	67 times ranked	10594 citing authors

#	Article	IF	Citations
1	High-Performance Asymmetric Supercapacitor Based on Graphene Hydrogel and Nanostructured MnO₂. ACS Applied Materials & Interfaces, 2012, 4, 2801-2810.	4.0	681
2	Mussel-Inspired Synthesis of Polydopamine-Functionalized Graphene Hydrogel as Reusable Adsorbents for Water Purification. ACS Applied Materials & Interfaces, 2013, 5, 425-432.	4.0	633
3	Low-Cost High-Energy Potassium Cathode. Journal of the American Chemical Society, 2017, 139, 2164-2167.	6.6	446
4	Electrochemical Nature of the Cathode Interface for a Solid-State Lithium-Ion Battery: Interface between LiCoO₂ and Garnet-Li₇La₃Zr₂O₁₂. Chemistry of Materials, 2016, 28, 8051-8059.	3.2	373
5	One-Step Electrochemical Synthesis of PtNi Nanoparticle-Graphene Nanocomposites for Nonenzymatic Amperometric Glucose Detection. ACS Applied Materials & Interfaces, 2011, 3, 3049-3057.	4.0	357
6	Solid-State Lithium Metal Batteries Promoted by Nanotechnology: Progress and Prospects. ACS Energy Letters, 2017, 2, 1385-1394.	8.8	314
7	Flexible All-Solid-State Asymmetric Supercapacitors Based on Free-Standing Carbon Nanotube/Graphene and Mn₃O₄ Nanoparticle/Graphene Paper Electrodes. ACS Applied Materials & Interfaces, 2012, 4, 7020-7026.	4.0	256
8	An Aqueous Symmetric Sodiumâ€Ion Battery with NASICONâ€Structured Na₃MnTi(PO₄)₃. Angewandte Chemie - International Edition, 2016, 55, 12768-12772.	7.2	236
9	Liquid Kâ€“Na Alloy Anode Enables Dendriteâ€Free Potassium Batteries. Advanced Materials, 2016, 28, 9608-9612.	11.1	235
10	Na_xMV(PO₄)₃ (M = Mn, Fe, Ni) Structure and Properties for Sodium Extraction. Nano Letters, 2016, 16, 7836-7841.	4.5	229
11	Hexacyanoferrateâ€Type Prussian Blue Analogs: Principles and Advances Toward Highâ€Performance Sodium and Potassium Ion Batteries. Advanced Energy Materials, 2021, 11, 2000943.	10.2	217
12	A Highâ€Energyâ€Density Potassium Battery with a Polymerâ€Gel Electrolyte and a Polyaniline Cathode. Angewandte Chemie - International Edition, 2018, 57, 5449-5453.	7.2	205
13	Coating Graphene Paper with 2D-Assembly of Electrocatalytic Nanoparticles: A Modular Approach toward High-Performance Flexible Electrodes. ACS Nano, 2012, 6, 100-110.	7.3	203
14	Stabilizing a High-Energy-Density Rechargeable Sodium Battery with a Solid Electrolyte. CheM, 2018, 4, 833-844.	5.8	195
15	Na₃MnZr(PO₄)₃: A High-Voltage Cathode for Sodium Batteries. Journal of the American Chemical Society, 2018, 140, 18192-18199.	6.6	195
16	Exploring reversible oxidation of oxygen in a manganese oxide. Energy and Environmental Science, 2016, 9, 2575-2577.	15.6	175
17	2D and 3D graphene materials: Preparation and bioelectrochemical applications. Biosensors and Bioelectronics, 2015, 65, 404-419.	5.3	172
18	A Plasticâ€“Crystal Electrolyte Interphase for Allâ€Solidâ€State Sodium Batteries. Angewandte Chemie - International Edition, 2017, 56, 5541-5545.	7.2	160

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19	Sodium Extraction from NASICON-Structured Na₃MnTi(PO₄)₃ through Mn(III)/Mn(II) and Mn(IV)/Mn(III) Redox Couples. Chemistry of Materials, 2016, 28, 6553-6559.	3.2	156
20	A Composite Gelâ€“Polymer/Glassâ€“Fiber Electrolyte for Sodiumâ€Ion Batteries. Advanced Energy Materials, 2015, 5, 1402235.	10.2	145
21	Growth of coral-like PtAuâ€“MnO2 binary nanocomposites on free-standing graphene paper for flexible nonenzymatic glucose sensors. Biosensors and Bioelectronics, 2013, 41, 417-423.	5.3	142
22	Lowâ€Cost Hollow Mesoporous Polymer Spheres and Allâ€Solidâ€State Lithium, Sodium Batteries. Advanced Energy Materials, 2016, 6, 1501802.	10.2	132
23	Cytotoxicity Evaluation of Oxidized Single-Walled Carbon Nanotubes and Graphene Oxide on Human Hepatoma HepG2 cells: An iTRAQ-Coupled 2D LC-MS/MS Proteome Analysis. Toxicological Sciences, 2012, 126, 149-161.	1.4	128
24	A Sodiumâ€Ion Battery with a Lowâ€Cost Crossâ€Linked Gelâ€Polymer Electrolyte. Advanced Energy Materials, 2016, 6, 1600467.	10.2	126
25	Polymer electrolytes and interfaces toward solid-state batteries: Recent advances and prospects. Energy Storage Materials, 2020, 33, 26-54.	9.5	123
26	Growth of Copper Nanocubes on Graphene Paper as Free-Standing Electrodes for Direct Hydrazine Fuel Cells. Journal of Physical Chemistry C, 2012, 116, 7719-7725.	1.5	114
27	Polyanthraquinone-Triazineâ€”A Promising Anode Material for High-Energy Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2018, 10, 37023-37030.	4.0	106
28	Probing the Energy Storage Mechanism of Quasiâ€Metallic Na in Hard Carbon for Sodiumâ€Ion Batteries. Advanced Energy Materials, 2021, 11, 2003854.	10.2	104
29	Nitrogen-Doped Perovskite as a Bifunctional Cathode Catalyst for Rechargeable Lithiumâ€“Oxygen Batteries. ACS Applied Materials & Interfaces, 2018, 10, 5543-5550.	4.0	100
30	Formation of Stable Interphase of Polymer-in-Salt Electrolyte in All-Solid-State Lithium Batteries. Energy Material Advances, 2021, 2021, .	4.7	99
31	Cathode Dependence of Liquid-Alloy Naâ€“K Anodes. Journal of the American Chemical Society, 2018, 140, 3292-3298.	6.6	95
32	Crossâ€Linked Chitosan as a Polymer Network Binder for an Antimony Anode in Sodiumâ€Ion Batteries. Advanced Energy Materials, 2016, 6, 1502130.	10.2	94
33	Lowâ€Cost Higher Loading of a Sulfur Cathode. Advanced Energy Materials, 2016, 6, 1502059.	10.2	92
34	Three Electron Reversible Redox Reaction in Sodium Vanadium Chromium Phosphate as a Highâ€Energyâ€Density Cathode for Sodiumâ€Ion Batteries. Advanced Functional Materials, 2020, 30, 1908680.	7.8	85
35	Sizeâ€, Waterâ€, and Defectâ€Regulated Potassium Manganese Hexacyanoferrate with Superior Cycling Stability and Rate Capability for Lowâ€Cost Sodiumâ€Ion Batteries. Small, 2019, 15, e1902420.	5.2	82
36	Progress in electrolyte and interface of hard carbon and graphite anode for sodiumâ€ion battery. , 2022, 4, 458-479.		77

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37	Comparative protein profile of human hepatoma HepG2 cells treated with graphene and single-walled carbon nanotubes: An iTRAQ-coupled 2D LCâ€“MS/MS proteome analysis. Toxicology Letters, 2011, 207, 213-221.	0.4	76
38	Roomâ€Temperature Liquid Naâ€“K Anode Membranes. Angewandte Chemie - International Edition, 2018, 57, 14184-14187.	7.2	73
39	Prussianâ€blue materials: Revealing new opportunities for rechargeable batteries. InformaÄnÃ-MateriÃ¡ly, 2022, 4, .	8.5	73
40	An Aqueous Symmetric Sodiumâ€ion Battery with NASICONâ€Structured Na₃MnTi(PO₄)₃. Angewandte Chemie, 2016, 128, 12960-12964.	1.6	72
41	Selective CO Evolution from Photoreduction of CO₂ on a Metal-Carbide-Based Composite Catalyst. Journal of the American Chemical Society, 2018, 140, 13071-13077.	6.6	65
42	A perspective on the Li-ion battery. Science China Chemistry, 2019, 62, 1555-1556.	4.2	62
43	Stack gas emissions of PCDD/Fs from hospital waste incinerators in China. Chemosphere, 2009, 77, 634-639.	4.2	61
44	The prospect and challenges of sodiumâ€ion batteries for lowâ€temperature conditions. , 2022, 1, 373-395.		58
45	Elevating Energy Density for Sodium-Ion Batteries through Multielectron Reactions. Nano Letters, 2021, 21, 2281-2287.	4.5	54
46	A Highâ€Energyâ€Density Potassium Battery with a Polymerâ€Gel Electrolyte and a Polyaniline Cathode. Angewandte Chemie, 2018, 130, 5547-5551.	1.6	47
47	Oxalate co-precipitation synthesis of LiNi0.6Co0.2Mn0.2O2 for low-cost and high-energy lithium-ion batteries. Materials Today Communications, 2019, 19, 262-270.	0.9	47
48	The Origin of Superior Performance of Co(OH)2 in Hybrid Supercapacitors. CheM, 2017, 3, 26-28.	5.8	43
49	In Situ Formation of Liquid Metals via Galvanic Replacement Reaction to Build Dendriteâ€Free Alkaliâ€Metalâ€ion Batteries. Angewandte Chemie - International Edition, 2020, 59, 12170-12177.	7.2	41
50	A Ternary Hybridâ€Cation Roomâ€Temperature Liquid Metal Battery and Interfacial Selection Mechanism Study. Advanced Materials, 2020, 32, e2000316.	11.1	40
51	Importance of Crystallographic Sites on Sodium-Ion Extraction from NASICON-Structured Cathodes for Sodium-Ion Batteries. ACS Applied Materials & Interfaces, 2021, 13, 14312-14320.	4.0	35
52	A Plasticâ€“Crystal Electrolyte Interphase for Allâ€Solidâ€State Sodium Batteries. Angewandte Chemie, 2017, 129, 5633-5637.	1.6	34
53	Electrochemical Performance of Large-Grained NaCrO₂ Cathode Materials for Na-Ion Batteries Synthesized by Decomposition of Na₂Cr₂O₇·2H₂O. Chemistry of Materials, 2019, 31, 5214-5223.	3.2	34
54	Experimental and theoretical investigation of Na4MnAl(PO4)3 cathode material for sodium-ion batteries. Chemical Engineering Journal, 2021, 425, 130680.	6.6	29

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55	Formation of Stable Interphase of Polymer-in-Salt Electrolyte in All-Solid-State Lithium Batteries. Energy Material Advances, 2020, 2020, 1-10.	4.7	27
56	Minimizing the interfacial resistance for a solid-state lithium battery running at room temperature. Chemical Engineering Journal, 2022, 448, 137740.	6.6	27
57	Achieving a bifunctional conformal coating on nickel-rich cathode LiNi0.8Co0.1Mn0.1O2 with half-cyclized polyacrylonitrile. Electrochimica Acta, 2021, 386, 138440.	2.6	25
58	Long stable cycling of fluorine-doped nickel-rich layered cathodes for lithium batteries. Sustainable Energy and Fuels, 2017, 1, 1292-1298.	2.5	22
59	The nitrogen-doped carbon coated Na4MnV(PO4)3 as a high electrochemical performance cathode material for sodium-ion batteries. Applied Surface Science, 2022, 601, 154218.	3.1	18
60	Cytotoxicity of single-walled carbon nanotubes on human hepatoma HepG2 cells: An iTRAQ-coupled 2D LCâ€“MS/MS proteome analysis. Toxicology in Vitro, 2011, 25, 1820-1827.	1.1	17
61	Roomâ€Temperature Liquid Naâ€“K Anode Membranes. Angewandte Chemie, 2018, 130, 14380-14383.	1.6	15
62	In Situ Formation of Liquid Metals via Galvanic Replacement Reaction to Build Dendriteâ€Free Alkaliâ€Metalâ€Ion Batteries. Angewandte Chemie, 2020, 132, 12268-12275.	1.6	9
63	Sodiumâ€Ion Batteries: Probing the Energy Storage Mechanism of Quasiâ€Metallic Na in Hard Carbon for Sodiumâ€Ion Batteries (Adv. Energy Mater. 11/2021). Advanced Energy Materials, 2021, 11, 2170041.	10.2	2
64	Introduction to Electrochemical Energy Storage. , 2019, , 1-28.		0
65	Charge Transfer and Storage of an Electrochemical Cell and Its Nano Effects. , 2019, , 29-87.		0
66	Utilization of the V5+/V4 + Redox Reaction in Nasicon-Structured Cathode Materials for Sodium-Ion Batteries. ECS Meeting Abstracts, 2021, MA2021-02, 1695-1695.	0.0	0